

# FISHstory: Using Citizen Science to Describe Historic Catches in the US South Atlantic



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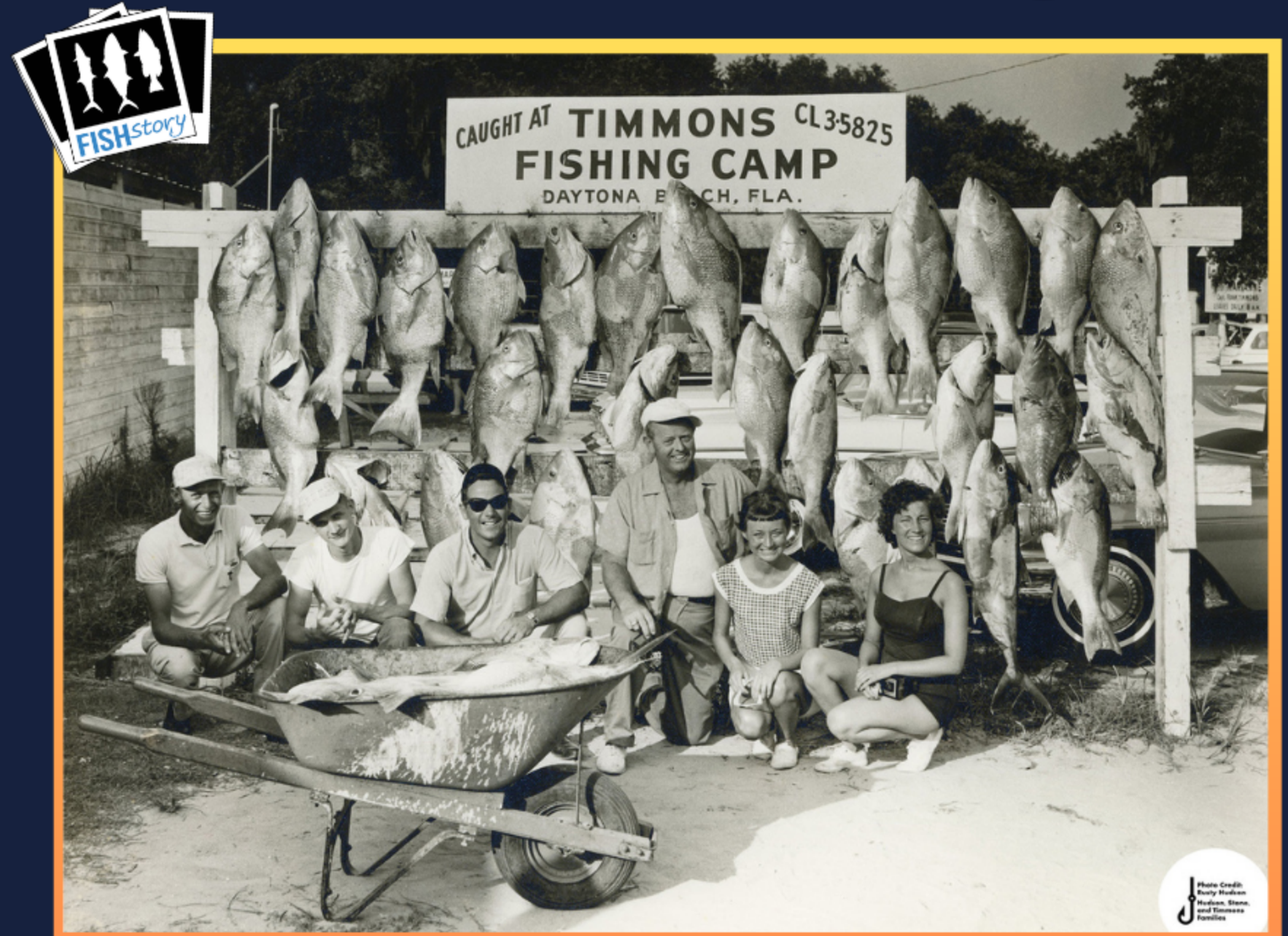


## Background

Much of the finfish harvest in the US South Atlantic is dominated by recreational fisheries where data are limited, especially during historic time periods. FISHstory, a pilot project developed through the South Atlantic Fishery Management Council's Citizen Science Program, developed a standardized protocol for archiving and analyzing historic photos from the 1940s to 1970s from a for-hire fleet based in Florida.

These photos document the beginnings of the South Atlantic for-hire fishery and are an untapped source of data that can help recreate information on catch and length composition prior to when dedicated catch monitoring programs began.

During project development a diverse stakeholder group provided guidance, data end users were consulted, and expert feedback was incorporated to help ensure the data collected would inform fisheries management.



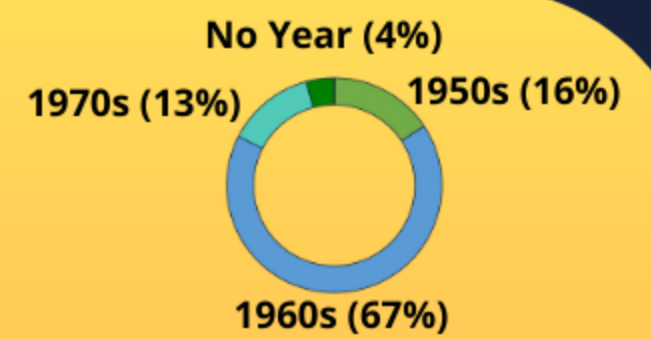
## THE FISHstory PROJECT HAD THREE MAIN COMPONENTS:



### Photo Archive

Historic fishing photos were digitized with key metadata.

Over 1,374 photos were archived. The percent of photos archived by decade is displayed in the figure on the right. Photos included trips taken in all months of the year.

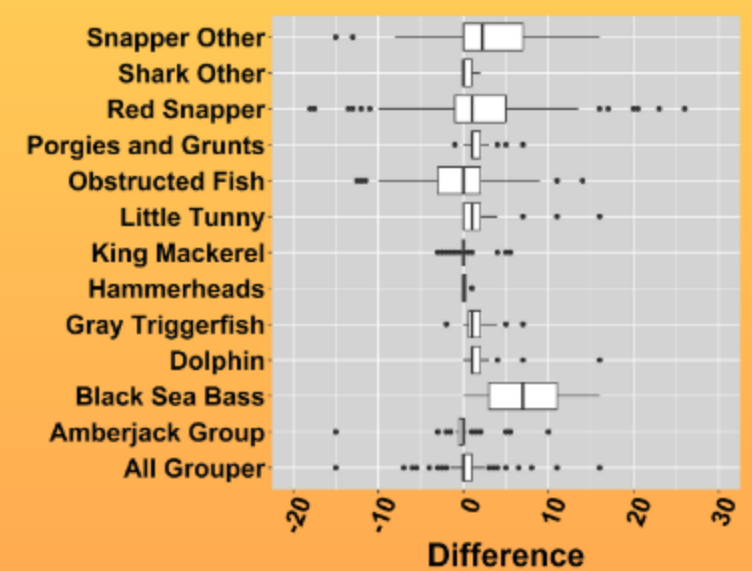


### For-Hire Catch Composition

Volunteers were trained to identify and count fish and people in historic photos using the online crowd-sourcing platform, Zooniverse. Multiple volunteers classified each photo. A Validation Team (VT) reviewed photos when there was volunteer disagreement.

Over 2,120 volunteers classified 1,000 photos. 180 photos were reviewed by the VT.

A comparison of the species counts for photos reviewed by the VT and volunteers is displayed in the figure on the right. The closer the boxes are to the zero difference line the more similar the counts were between the groups.

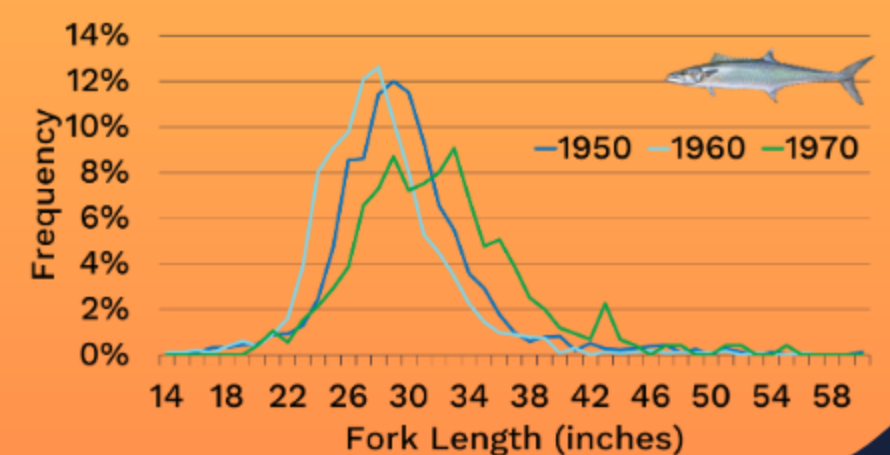


### Length Estimation

A method was developed to measure fish in the photos using the lumber in the leaderboards as a scale. The protocol was tested for accuracy and precision and applied to King Mackerel.

All archived photos were reviewed & King Mackerel were measured when present.

King Mackerel length compositions by decade are displayed in the figure on the right.



## Key Takeaways

- The methods developed to analyze historic photos show great promise.
- Volunteers are making valuable contributions through donating photos, volunteering in Zooniverse, and serving on the Validation Team.
- Identifying fish in historic photos is challenging but simplifying data collection can improve data quality.
- Fishermen are interested in sharing their historic photos and stories.

## Next Steps

Moving FISHstory from a pilot to a full scale project.

- Pursuing funding to support expansion.
- Expanding the geographic and temporal range of photos.
- Improving the efficiency of processes.
- Estimating length compositions for more species.

## Acknowledgements

The FISHstory project was truly a team effort. Special thanks go to Rusty Hudson for sharing his family's photos, Ken Brennan, Amber Von Harten, the Design and Validation Teams, length analysts, Zooniverse volunteers, and Zooniverse platform. Thanks to NOAA Fisheries for helping fund the FISHstory project.